

Amendments to the Claims:

This listing of claims will replace all prior versions and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ~~metal material for machine parts~~ part for use in a casting machine for casting an article from a molten aluminum alloy, comprising:
 - a steel base[[.]];
 - a Ni alloy layer formed on a surface of the base[[.]];
 - and titanium carbide (TiC) bonded in a particulate state to the surface of the Ni alloy layer, wherein the TiC particles are partly exposed on the surface of the Ni alloy layer and repel molten aluminum alloy.
2. (Cancelled)
3. (Currently Amended) The metal material for parts of a casting machine according to claim [[2]] 1, wherein the gaps in the TiC particles are filled in with fine ceramic particles comprising at least one of boron nitride (BN), alumina (Al₂O₃) and zirconia (ZrO₂).

4. (Original) The metal material for parts of a casting machine according to claim 1, wherein the Ni alloy has the composition of 2.6 to 3.2% of B, 18 to 28% of Mo, 3.6 to 5.2% of Si and 0.05 to 0.22% of C, with the remainder being Ni and unavoidable impurities.

5. (Currently Amended) A molten aluminum alloy-contact member for use in a casting machine for casting an article from a molten aluminum alloy, comprising:

a body, composed of a steel base;

and a nickel alloy layer formed on a surface of the base on the side to be in direct contact with a molten aluminum alloy[.]; and

titanium carbide (TiC) bonded in a particulate state to the surface of the Ni alloy layer, wherein the TiC particles are partly exposed on the surface of the Ni alloy layer and repel molten aluminum alloy.

6. (Cancelled)

7. (Currently Amended) The molten aluminum alloy-contact member according to claim [[6]] 5, wherein the gaps in the TiC particles are filled in with fine ceramic particles comprising at least one of boron nitride (BN), alumina (Al_2O_3) and zirconia (ZrO_2).

8. (Original) The molten aluminum alloy-contact member according to claim 5, wherein the Ni alloy has the composition of 2.6 to 3.2% of B, 18 to 28% of Mo, 3.6 to 5.2% of Si and 0.05 to 0.22% of C, with the remainder being Ni and unavoidable impurities.

9. (Currently Amended) The molten aluminum alloy-contact member according to any one of claims ~~5 to 8~~ 5, 7 or 8, wherein said member is a machine part having a surface to be in direct contact with a molten aluminum alloy, ~~such as a conduit, a mold, a sleeve or an insert.~~

10. (Currently Amended) A method for producing a molten aluminum alloy-contact member for ~~use in~~ a casting machine for casting an article from a molten aluminum alloy, comprising the steps of:

forming a Ni alloy layer on a surface of a steel base, thereby forming a body;

burying the body in TiC powder; and

placing the body, together with the TiC powder, in a vacuum heating oven and heating them under vacuum to a temperature at which a liquid phase generates from the Ni alloy, thereby bonding the TiC particles to the surface of the Ni alloy layer, the TiC particles repelling molten aluminum alloy.

11. (Original) The method for producing a molten aluminum alloy-contact member according to claim 10, wherein after the bonding of the TiC particles to the Ni alloy layer, the member is subjected to a process comprising applying a slurry of a mixture of a binder and a fine ceramic powder comprising at least one of boron nitride (BN), alumina (Al_2O_3) and zirconia (ZrO_2) to the TiC particles, and burning the ceramic powder into the surface of the member.

12. (Original) The method for producing a molten aluminum alloy-contact member according to claim 10, wherein the average particle diameter of the TiC powder is in the range of 10-500 nm.

13. (Original) The method for producing a molten aluminum alloy-contact member according to claim 10, wherein the Ni alloy layer is formed by thermal spraying of a Ni alloy having the composition of 2.6 to 3.2% of B, 18 to 28% of Mo, 3.6 to 5.2% of Si and 0.05 to 0.22% of C, with the remainder being Ni and unavoidable impurities.

14. (New) A method of casting an article from a molten aluminum alloy comprising:
flowing molten aluminum alloy into a casting machine wherein at least a part of the casting machine in contact with the molten aluminum alloy comprises:

a steel base;

a Ni alloy layer formed on a surface of the base; and

titanium carbide (TiC) bonded in a particulate state to the surface of the Ni alloy layer, wherein the TiC particles are partly exposed on the surface of the Ni alloy layer and repel the molten aluminum alloy.

15. (New) The method of casting according to claim 14, wherein after the bonding of the TiC particles to the Ni alloy layer, the member is subjected to a process comprising applying a slurry of a mixture of a binder and a fine ceramic powder comprising at least one of boron nitride (BN), alumina (Al_2O_3) and zirconia (ZrO_2) to the TiC particles, and burning the ceramic powder into the surface of the member.

16. (New) The method of casting according to claim 14, wherein the average particle diameter of the TiC powder is in the range of 10-500 nm.
17. (New) The method of casting according to claim 14, wherein the Ni alloy layer is formed by thermal spraying of a Ni alloy having the composition of 2.6 to 3.2% of B, 18 to 28% of Mo, 3.6 to 5.2% of Si and 0.05 to 0.22% of C, with the remainder being Ni and unavoidable impurities.
18. (New) The method of casting according to claim 14, wherein the gaps in the TiC particles are filled in with fine ceramic particles comprising at least one of boron nitride (BN), alumina (Al_2O_3) and zirconia (ZrO_2).
19. (New) The method of casting according to claim 14, wherein the Ni alloy has the composition of 2.6 to 3.2% of B, 18 to 28% of Mo, 3.6 to 5.2% of Si and 0.05 to 0.22% of C, with the remainder being Ni and unavoidable impurities.